
EXHIBIT M1

WATER QUALITY MANAGEMENT PERMIT FOR
THE PENN'S PRESERVE WASTEWATER TREATMENT PLANT



WATER QUALITY MANAGEMENT PERMIT

PERMIT NO. 1596405

AMENDMENT NO. Renewal

APS ID. 999033

AUTH. ID. 1283238

A. PERMITTEE (Name and Address): Willistown Township 688 Sugartown Road Malvern, PA 19355-3302		CLIENT ID#: 86424	B. PROJECT/FACILITY (Name): Penns Preserve WWTP / Willistown Township Sewer System	
C. LOCATION (Municipality, County): Willistown Township, Chester County			SITE ID#: 255715	
D. This permit approves the operation of sewage facilities consisting of: an influent pump station, bar screen, a two-cell treatment lagoon, a storage lagoon, a spray irrigation pump station, chlorine disinfection and two spray irrigation fields for treated effluent disposal				
Pump Stations: _____ Design Capacity: _____ GPM		Manure Storage: Volume: _____ MG Freeboard: _____ inches		Sewage Treatment Facility: Annual Average Flow: <u>.0450</u> MGD Design Hydraulic Capacity: <u>.0450</u> MGD Design Organic Capacity: <u>83.5</u> lb/day
E. APPROVAL GRANTED BY THIS PERMIT IS SUBJECT TO THE FOLLOWING: 1. New Permits: All construction, operations and procedures shall be in accordance with the Water Quality Management Permit application dated _____, its supporting documentation and addendums dated _____, which are hereby made a part of this permit. Renewal: All construction, operations and procedures shall be in accordance with the Water Quality Management Permit Amendment application dated <u>07/12/2019</u> and its supporting documentation and addendums dated <u>12/10/2019</u> , which are hereby made a part of this amendment. Except for any herein approved modifications, all terms, conditions, supporting documentation and addendums approved under Water Quality Management Permit No. <u>15961405</u> dated <u>10/15/08 and 02/16/10</u> shall remain in effect. Transfers: Water Quality Management Permit No. _____ dated _____ and conditions, supporting documentation and addendums are also made part of this transfer. 2. Permit Conditions Relating to Sewerage are attached and made part of this permit. 3. Special Conditions <u>I-XIII</u> are attached and made part of this permit.				
F. THE AUTHORITY GRANTED BY THIS PERMIT IS SUBJECT TO THE FOLLOWING FURTHER QUALIFICATIONS: 1. If there is a conflict between the application or its supporting documents and amendments and the attached conditions, the attached conditions shall apply. 2. Failure to comply with the rules and regulations of DEP or with the terms or conditions of this permit shall void the authority given to the permittee by the issuance of this permit. 3. This permit is issued pursuant to the Clean Streams Law Act of June 22, 1937, P.L. 1987, as amended 35 P.S. §691.1 <i>et seq.</i> Issuance of this permit shall not relieve the permittee of any responsibility under any other law. 4. This permit shall expire on <u>02/28/2025</u> . The permittee shall submit an application to renew the permit no later than 180 days prior to the permit expiration date.				
PERMIT ISSUED: S/ 2/28/2020		BY: _____ Thomas L. Magge Clean Water Program Manager Southeast Regional Office		
Permit Effective: <u>March 1, 2020</u>		TITLE: _____		



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

PERMIT CONDITIONS RELATING TO SEWERAGE
For use in Water Quality Management Permits

(Check boxes that apply)

General

- ☒ 1. The Department of Environmental Protection (DEP) considers the licensed Professional Engineer whose seal is affixed to the design documents to be fully responsible for the adequacy of all aspects of the facility design.
- ☒ 2. The permittee shall adopt and enforce an ordinance requiring the abandonment of privies, cesspools or similar receptacles for human waste and onlot sewage disposal systems on the premises of occupied structures accessible to public sewers. All such structures must be connected to the public sewers.
- ☐ 3. The outfall sewer or drain shall be extended to the low water mark of the receiving body of water. Where necessary to ensure proper mixing and waste assimilation, an outfall sewer or drain may be extended with appurtenances below the low water mark and into the bed of a navigable stream provided that the permittee has secured an easement, right-of-way, license or lease from DEP in accordance with Section 15 of the Dam Safety and Encroachments Act, the Act of November 26, 1978, P.L. 1375, as amended.
- ☐ 4. The approval is specifically made contingent on the permittee acquiring all necessary property rights, by easement or otherwise, providing for the satisfactory construction, operation, maintenance and replacement of all sewers or sewerage structures in, along or across private property with full rights of ingress, egress and regress.
- ☒ 5. When construction of the approved sewerage facilities is completed and before they are placed in operation, the permittee shall notify DEP in writing so that a DEP representative may inspect the facilities.
- ☐ 6. The approval of the plans, and the authority granted in this permit, if not specifically extended, shall cease and be null and void 5 years from the issuance date of this permit unless construction or modification of the facilities covered by this permit has begun on or before the fifth anniversary of the permit date.
- ☒ 7. If, at any time, the sewerage facilities covered by this permit create a public nuisance, including but not limited to, causing malodors or causing environmental harm to waters of the Commonwealth, DEP may require the permittee to adopt appropriate remedial measures to abate the nuisance or harm.
- ☒ 8. If, after the issuance of this permit, DEP approves a municipal sewage facilities official plan or an amendment to an official plan under Act 537 (Pennsylvania Sewage Facilities Act, the Act of January 24, 1966, P.L. 1535 as amended) in which sewage from the herein approved facilities will be treated and disposed of at other planned facilities, the permittee shall, upon notification from the municipality or DEP, provide for the conveyance of its sewage to the planned facilities, abandon use and decommission the herein approved facilities including the proper disposal of solids, and notify DEP accordingly. The permittee shall adhere to schedules in the approved official plan, amendments to the plan, or other agreements between the permittee and municipality. This permit shall then, upon notice from DEP, terminate and become null and void and shall be relinquished to DEP.
- ☒ 9. This permit does not relieve the permittee of its obligations to comply with all federal, interstate, state or local laws, ordinances and regulations applicable to the sewerage facilities.
- ☒ 10. This permit does not give any real or personal property rights or grant any exclusive privileges, nor shall it be construed to grant or confirm any right, easement or interest in, on, to or over any lands which belong to the Commonwealth.
- ☐ 11. The authority granted by this permit is subject to all effluent requirements, monitoring requirements and other conditions as set forth in the NPDES Permit and all subsequent amendments and renewals. No discharge is authorized from these facilities unless approved by an NPDES Permit.

Construction

- ☐ 12. This permit is issued under the authorization of The Clean Streams Law and 25 Pa. Code Chapter 91. The permittee shall obtain all necessary permits, approvals and/or registrations under 25 Pa. Code Chapters 102, 105 and 106 prior to commencing construction of the facilities authorized by this permit, as applicable. The permittee should contact the DEP office that issued this permit if there are any questions concerning the applicability of additional permits.

- ☒ 13. The facilities shall be constructed under the supervision of a Pennsylvania licensed Professional Engineer in accordance with the approved reports, plans and specifications.
- ☒ 14. A Pennsylvania licensed Professional Engineer shall certify that construction of the permitted facilities was completed in accordance with the application and design plans submitted to DEP, using the "Post Construction Certification" form (3800-PM-WSFR0179a). It is the permittee's responsibility to ensure that a Professional Engineer is on-site to provide the necessary oversight and/or inspections to certify the facilities. The certification must be submitted to DEP before the facility is placed in operation. As-built drawings, photographs (if available) and a description of all deviations from the application and design plans must be submitted to DEP within 30 days of certification.
- ☐ 15. Manhole inverts shall be formed to facilitate the flow of the sewage and to prevent the stranding of sewage solids. The manhole structure shall be built to prevent undue infiltration, entrance of street wash or grit and provide safe access to facilitate manhole maintenance activities.
- ☐ 16. The local Waterways Conservation Officer of the Pennsylvania Fish and Boat Commission (PFBC) shall be notified when the construction of any stream crossing and/or outfall is started and completed. A written permit must be secured from the PFBC if the use of explosives in any waterways is required and the permittee shall notify the local Waterways Conservation Officer when explosives are to be used.

Operation and Maintenance

- ☒ 17. The permittee shall maintain records of "as-built" plans showing all the treatment facilities as actually constructed together with facility operation and maintenance (O&M) manuals and any other relevant information that may be required. Upon request, the "as-built" plans and O&M manuals shall be filed with DEP.
- ☐ 18. The sewers shall have adequate foundation support as soil conditions require. Trenches shall be back-filled to ensure that sewers will have proper structural stability, with minimum settling and adequate protection against breakage. Concrete used in connection with these sewers shall be protected from damage by water, freezing, drying or other harmful conditions until cured.
- ☐ 19. Stormwater from roofs, foundation drains, basement drains or other sources shall not be admitted directly to the sanitary sewers.
- ☐ 20. The approved sewers shall be maintained in good condition, kept free of deposits by flushing or other cleaning methods and repaired when necessary.
- ☒ 21. The sewerage facilities shall be properly operated and maintained to perform as designed.
- ☐ 22. The attention of the permittee is called to the highly explosive nature of certain gases generated by the digestion of sewage solids when these gases are mixed in proper proportions with air and to the highly toxic character of certain gases arising from such digestion or from sewage in poorly ventilated compartments or sewers. Therefore, at all places throughout the sewerage facilities where hazard of fire, explosion or danger from toxic gases may occur, the permittee shall post conspicuous permanent and legible warnings. The permittee shall instruct all employees concerning the aforesaid hazards, first aid and emergency methods of meeting such hazards and shall make all necessary equipment and material accessible.
- ☒ 23. An operator certified in accordance with the Water and Wastewater Systems Operator Certification Act of February 21, 2002, 63 P.S. §§1001, *et seq.* shall operate the sewage treatment plant.
- ☐ 24. The permittee shall properly control any industrial waste discharged into its sewerage system by regulating the rate and quality of such discharge, requiring necessary pretreatment and excluding industrial waste, if necessary, to protect the integrity or operation of the permittee's sewerage system.
- ☒ 25. There shall be no physical connection between a public water supply system and a sewer or appurtenance to it which would permit the passage of any sewage or polluted water into the potable water supply. No water pipe shall pass through or come in contact with any part of a sewer manhole.
- ☒ 26. All connections to the approved sanitary sewers must be in accordance with the official Act 537 Plan and, if applicable, a corrective action plan as contained in the approved Title 25 Pa. Code Chapter 94 Municipal Wasteload Management Annual Report.
- ☒ 27. Collected screenings, slurries, sludge and other solids shall be handled and disposed of in compliance with Title 25 Pa. Code Chapters 271, 273, 275, 283 and 285 (related to permits and requirements for land filling, land application, incineration and storage of sewage sludge), Federal Regulations 40 CFR 257 and the Federal Clean Water Act and its amendments.



WATER QUALITY MANAGEMENT POST CONSTRUCTION CERTIFICATION

PERMITTEE IDENTIFIER													
Permittee	Willistown Township Chester County												
Municipality	Willistown Township												
County	Chester												
WQM Permit No.	<u>1596405</u>												
Facility Type	Sewage												
All of the above information should be taken directly from the Water Quality Management Permit.													
CERTIFICATION													
<p>This certification must be completed and returned to the permits section of the DEP's regional office issuing the WQM permit within 30 days of completion of the project and received by DEP prior to operation, and if requested, as-built drawings, photographs (if available) and a discussion of any DEP-approved deviations from the design plans during construction.</p>													
<p>I, being a Registered Professional Engineer in Pennsylvania, do hereby certify to the best of my knowledge and belief, based upon personal observation and interviews, that the above facility approved under the Water Quality Management Permit has been constructed in accordance with the plans, specifications and modifications approved by DEP.</p>													
<p>Construction Completion Date (MM/DD/YYYY): _____</p>													
<p style="text-align: center; font-size: 1.2em;">Engineer' s Seal</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #cccccc;"> <th style="text-align: center; padding: 5px;">Professional Engineer</th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;">Name _____ (Please Print or Type)</td> </tr> <tr> <td style="padding: 5px;">Signature _____</td> </tr> <tr> <td style="padding: 5px;">Date _____</td> </tr> <tr> <td style="padding: 5px;">License Expiration Date _____</td> </tr> <tr> <td style="padding: 5px;">Firm or Agency _____</td> </tr> <tr> <td style="padding: 5px;">Telephone _____</td> </tr> <tr style="background-color: #cccccc;"> <th style="text-align: center; padding: 5px;">Permittee or Authorized Representative</th> </tr> <tr> <td style="padding: 5px;">Name _____ (Please Print or Type)</td> </tr> <tr> <td style="padding: 5px;">Signature _____</td> </tr> <tr> <td style="padding: 5px;">Title _____</td> </tr> <tr> <td style="padding: 5px;">Telephone _____</td> </tr> </tbody> </table>	Professional Engineer	Name _____ (Please Print or Type)	Signature _____	Date _____	License Expiration Date _____	Firm or Agency _____	Telephone _____	Permittee or Authorized Representative	Name _____ (Please Print or Type)	Signature _____	Title _____	Telephone _____
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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF CLEAN WATER
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

PRIMARY FACILITY NAME/ADDRESS

NAME Penns Preserve STP

CLIENT Willistown Township Chester County

ADDRESS 688 Sugartown Road
Malvern, PA 19355-3302

LOCATION Willistown Township
Chester County

WATERSHED 3-G

1596405				001			
PERMIT NUMBER				OUTFALL NUMBER			

MONITORING PERIOD							
YEAR	MO	DAY		YEAR	MO	DAY	
			TO				

Reporting Frequency: Monthly

DMR Effective From: March 1, 2020

DMR Effective To: February 28, 2025

Permit Expires: February 28, 2025

Permit Application Due: September 1, 2024

☐ Check Here if No Discharge

NOTE: Read Instructions before completing this form

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow Influent	SAMPLE MEASUREMENT			MGD				XXX			
	PERMIT REQUIREMENT	0.045 Avg Mo	Report Daily Max		XXX	XXX	XXX			Continuous	Metered
Flow	SAMPLE MEASUREMENT			MGD				XXX			
	PERMIT REQUIREMENT	Report Avg Mo	Report Total Mo		XXX	XXX	XXX			Continuous	Metered
pH	SAMPLE MEASUREMENT			XXX				S.U.			
	PERMIT REQUIREMENT	XXX	XXX		6.0 Inst Min	XXX	9.0 IMAX			1/month	Grab
Carbonaceous Biochemical Oxygen Demand (CBOD5)	SAMPLE MEASUREMENT			XXX				mg/L			
	PERMIT REQUIREMENT	XXX	XXX		XXX	25 Avg Mo	50 IMAX			1/month	Grab
Total Suspended Solids	SAMPLE MEASUREMENT			XXX				mg/L			
	PERMIT REQUIREMENT	XXX	XXX		XXX	30 Avg Mo	60 IMAX			1/month	Grab
Fecal Coliform	SAMPLE MEASUREMENT			XXX				CFU/100 ml			
	PERMIT REQUIREMENT	XXX	XXX		XXX	200 Geo Mean	XXX			1/month	Grab

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).		TELEPHONE	DATE		
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA CODE	NUMBER	YEAR	MO DAY
COMMENTS (Report all violations on the "Non-Compliance Reporting Form")						



COMMONWEALTH OF PENNSYLVANIA
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PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Total Nitrogen	SAMPLE MEASUREMENT			XXX				mg/L			
	PERMIT REQUIREMENT	XXX	XXX		XXX	Report Avg Mo	XXX			1/month	Grab

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE
TYPED OR PRINTED			AREA CODE	NUMBER
COMMENTS (<i>Report all violations on the "Non-Compliance Reporting Form"</i>)				

3800-FM-BCW0462 12/2016



PRIMARY FACILITY NAME/ADDRESS

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF CLEAN WATER
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

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TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA CODE	NUMBER	YEAR	MO
COMMENTS (<i>Report all violations on the "Non-Compliance Reporting Form"</i>)						

INSTRUCTIONS FOR COMPLETING DISCHARGE MONITORING REPORTS (DMRs)

General

One or more Discharge Monitoring Reports (DMRs) are attached to your permit for reporting the results of self-monitoring activities as required by your permit. You should make copies of the DMRs for your ongoing use, unless you elect to participate in the Department of Environmental Protection's (DEP's) electronic DMR (eDMR) program (see www.dep.pa.gov/edmr).

- Reporting frequencies will vary depending on the monitoring frequencies listed in your permit, and are generally monthly, quarterly semi-annually and annually.
- Your reports must be received by DEP on the 28th day of the month following the end of the reporting period, unless otherwise specified in Part C of your permit.
- Your permit may require submission of DMRs to other agencies, including the U.S. Environmental Protection Agency (EPA).
- If you receive DMRs in the mail from EPA, please discontinue use of DMR Form No. 3800-FM-BCW0462 and begin using EPA's DMRs.
- DMRs will generally include pre-populated information for permittee name and address, facility location, permit number, outfall number, permit expiration date, parameter names, and permit requirements. If you identify any errors on a DMR issued by DEP, please contact the DEP regional office that issued your permit. If you identify any errors on a DMR issued by EPA, please contact DEP's Central Office at 717-787-6744. **DO NOT make changes to DMRs issued to you.**
- You may use computer-generated replicas of Form No. 3800-FM-BCW0462 or of EPA's DMR if you receive prior approval from DEP and EPA. **DEP reserves the right to instruct you to discontinue the submission of computer-generated DMRs if the permit requirements you entered on the form are inaccurate.**

Instructions

1. Enter statistical results into each blank field below the "VALUE" column headers. Results must be reported in the same units shown on the DMR.
2. Sum the total number of excursions or exceedances of permit limits across the row for each parameter and enter the value into the "NO. EX" field. For example, if the permit contains limits of 6.0 S.U. (Minimum) and 9.0 S.U. (Maximum) for pH, and the Minimum and Maximum results are 5.9 S.U. and 9.1 S.U., respectively, enter "2" into the "NO. EX" field.
3. Report the actual sampling frequency and sample type utilized during the reporting period in the fields corresponding to "Frequency of Analysis" and "Sample Type", respectively.
4. Type the name of the principal executive officer (or an authorized agent designated by a principal executive officer) who is taking responsibility for the report, sign the report (should be in ink), enter the telephone number of the responsible individual, and record the date that the report was signed. Mail only original, signed copies of DMRs.
5. In the Comments section at the bottom of the DMR, you may write a brief summary of violations in this section; however, DEP requests that all violations during the monitoring period be reported in more detail on DEP's **Non-Compliance Reporting Form** (3800-FM-BCW0440) and be submitted as an attachment to the DMR. Other uses of the Comments Section include explanations of attachments to the DMR, explanations for the unavailability of data, and brief summaries of issues that have affected operations or effluent quality during the monitoring period. Always consider attaching a letter or separate document to explain your situation in more detail.

No Discharge or No Data Available

If there was no discharge at all from an outfall during the monitoring period, check the “No Discharge” box on the top of the DMR. Complete the information above and below the table and mail the DMR to the appropriate agencies. Be sure to sign and date the DMR.

If there was no discharge of a specific parameter (e.g., if a chlorine limit is in the permit but chlorine was not used for disinfection during the entire reporting period), or if data are not available for a specific parameter for the entire reporting period, do not leave the DMR blank. Instead, report one of the following No Data Indicator (NODI) codes that apply to your situation in the appropriate value field, and **provide an explanation as an attachment to the DMR**:

- A** Use if you are exempted from monitoring the parameter because of a General Permit condition.
- E** Use if all samples or results are not available for the reporting period due to equipment failure or because sample collection was overlooked or samples could not be collected for the parameter.
- GG** Use if your permit requires sample collection and analysis only under certain conditions and those conditions were not met during the reporting period (e.g., report chlorine results only when chlorination system is used).
- FF** Other: use if there is any reason for the absence of data that is not covered by those above.

If you have at least one result for a parameter, the value should be reported and not a NODI code.

Calculations

The following explains how to calculate statistical values that are commonly required by permits:

Monthly Average – For Loading (lbs/day), sum the total of daily loadings and divide by the number of samples during the month. To calculate the daily loading, multiply the daily concentration (mg/l) by the flow (MGD) on the date of sampling and a conversion factor of 8.34. For Concentration, sum the total of daily concentrations and divide by the number of samples.

Weekly Average – For Loading (lbs/day), sum the total of average daily loadings during each week of the reporting period (beginning on a Sunday and ending on a Saturday) and divide by the number of samples during the week. For Concentration, sum the total of daily concentrations each week and divide by the number of samples. Report the maximum weekly average on the DMR.

Maximum Daily (“Daily Max”) – Report the maximum concentration or load measured during a 24-hour period during the reporting period; if multiple measurements are taken daily, include all data in the analysis.

Instantaneous Maximum (“IMAX”) – Report the maximum result obtained by a grab sample for a specific pollutant over the entire reporting period covered by a DMR.

Instantaneous Minimum (“Minimum”) – Report the minimum result obtained by a grab sample for a specific pollutant over the entire reporting period covered by a DMR.

Total Monthly Load (lbs) – Sum the total of average daily loadings, divide by the number of samples during the month, and multiply by the number of days in the month.

Geometric Mean – Report the average of a set of n sample results given by the n th root of their product. If any result is zero (0), substitute 1 for the calculation. For example, five samples were analyzed with the following results: 20, 300, 400, 500, and 0. The calculation of geometric mean is as follows (note that you will need to use the power function on a calculator):

$$\sqrt[5]{20 \cdot 300 \cdot 400 \cdot 500 \cdot 1} = \sqrt[5]{1,200,000,000} = (1,200,000,000)^{1/5} = \mathbf{65}$$

Non-Detect Data**Conventional and Toxic Parameters**

For calculating average values of data sets in which there are some "detections" (results at or above the laboratory reporting limit) and some "non-detect" data (results reported below the laboratory reporting limit), use the reporting limit for non-detect data. In other words, ignore the less than (<) symbol for statistical calculations and include the < symbol with the statistical result if there is at least one non-detect result in the data set. For example, four samples were analyzed with the following results: < 1.0, 2.0, < 1.0, and 1.0. The average statistical result is < 1.3.

Where the permit includes an effluent limitation for a parameter that is less than the most sensitive detection limit available, and the laboratory reports a value at or below the lowest level specified by the permit, you may use zero (0) in the calculation in lieu of the reporting limit, if the parameter is identified in 25 Pa. Code Chapter 16, Appendix A, Tables 2A and 2B. In general, parameters with limitations that are less than the most sensitive detection limit will be identified in Part C of the permit, if applicable.

Bacteria Parameters

Report all "non-detect" (e.g., < 2) and "too numerous to count" (TNTC) (e.g., > 2,000) results on DMR supplemental forms as reported by the laboratory. Do not report "TNTC" on supplemental forms, but instead report a value qualified with the ">" symbol. Where a data set includes one or more "non-detect" and/or TNTC results, calculate the geometric mean by ignoring qualifying symbols, but report the value with the symbol. If a data set includes both ">" and "<" qualifiers, the ">" qualifier takes precedence for reporting. For all "non-detect" values, specify in the Comments section of the DMR the maximum volume filtered at the laboratory.

Example 1 – For results are determined, < 2, 10, 20, and 30. The geometric mean should be reported as $< (2 \bullet 10 \bullet 20 \bullet 30)^{0.25} = < 10$. Specify the maximum volume filtered for the < 2 result in the DMR Comments.

Example 2 – Three results are determined, < 2, 1,000, and > 2,000. The geometric mean should be reported as $> (2 \bullet 1,000 \bullet 2,000)^{0.333} = > 158$.

Rounding and Precision

Statistical values reported on the DMR should be rounded to the same number of decimal places as the limit for the parameter as set forth in the permit. If the permit does not contain a limit but requests monitoring only, statistical values for concentration results should be rounded to the maximum number of decimal places in the data set as reported by the laboratory or the instrument used for analysis. If mass loads must be reported and there is no limit, round statistical values to the nearest whole number, unless the calculated number is less than one, in which case the value should be rounded to one significant figure (e.g., 0.1, 0.05, etc.). If the number you are rounding is followed by 5, 6, 7, 8, or 9, round the number up, otherwise round down.

The documents "Discharge Monitoring Reports Overview and Summary" (3800-BK-DEP3047) and "Management of Non-Detect Results for Discharge Monitoring Reports" (3800-FS-DEP4262) contain more information and are incorporated by reference. These documents are available on DEP's website.



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

SUPPLEMENTAL REPORT – CHEMICAL ADDITIVES USAGE

Facility Name: Willistown Township Sewer System
Municipality: Willistown Township County: Chester
Watershed: 3-G

Month: _____ Year: _____
NPDES Permit No.: 1596405 Outfall No.: _____
Renewal application due **180 days** prior to expiration
This permit will expire on **FEBRUARY 28, 2025**

Day	Chemical Names															
	gallons	lbs	gallons	lbs	gallons	lbs	gallons	lbs	gallons	lbs	gallons	lbs	gallons	lbs	gallons	lbs
1																
2																
3																
4																
5																
6																
7																
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I certify under penalty of law that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

Prepared By: _____

Title: _____

Signature: _____

Date: _____

SUPPLEMENTAL REPORT LAND APPLICATION SYSTEMS

Facility Name: Willistown Township Sewer System
Municipality: Willistown Township County: Chester
Watershed: 3-G

Month: _____
Permit No.: 1596405
This permit will expire on FEBRUARY 28, 2025

Year: _____
Outfall No.: _____

	Zone: Acres:	Zone: Acres:	Zone: Acres:	Zone: Acres:	Zone: Acres:	Precipitation		Average Temp	Ground Conditions
Day	Gallons	Gallons	Gallons	Gallons	Gallons	Inches	Type	°F	(Wet, Dry, Frozen)
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
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Prepared By: _____
Title: _____

Signature: _____
Date: _____

SUPPLEMENTAL REPORT GROUNDWATER MONITORING DATA REPORT

Facility Name: Willistown Township Sewer System Month: _____ Year: _____
Municipality: Willistown Township County: Chester Permit No.: 1596405
Watershed: 3-G Monitoring Well No.: _____

FIELD ANALYSIS

Top of Casing Elevation (ft) _____	Well Diameter (ft) _____	Temperature (°C) _____
Initial Depth of Water (ft) _____	Total Well Depth (ft) _____	pH (SU) _____
Volume of Water in Well (gal) _____	Total Vol Purged (gal) _____	Conductivity (µmhos/cm) _____

LAB ANALYSIS

Sample Date	Parameter	Q	Result	Units	Lab Reporting Limit	Units

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Prepared By: _____	Signature: _____
Title: _____	Date: _____

NON-COMPLIANCE REPORTING FORM

Use this supplemental form to report all permit violations and any other non-compliance that may endanger health or the environment, in accordance with your permit. Complete all sections that apply. If you are reporting violations of permit limits, monitoring requirements or schedules that do not pose an immediate threat to health or the environment, you may attach this form to the Discharge Monitoring Report (DMR). **Title 25, Pa. Code §§ 91.33 and 91.34 (regarding incidents causing or threatening pollution and activities utilizing pollutants, respectively), in part requires immediate notification by telephone to the Department of pollution incidents, remediation, and may require an additional report on the incident or plan of pollution prevention measures.** If you are reporting other non-compliance events, and the reporting deadline does not coincide with your submission of the DMR, it should be submitted separately to the Department by the reporting deadline set forth in the permit. See instructions for more information.

Facility Name: Willistown Township Sewer System
Municipality: Willistown Township County: Chester

Month: _____ Year: _____
Permit No.: 1596405

☐ **Violations of Permit Effluent Limitations***

Date	Parameter	Permit Limit	Units	Statistical Code	Result	Units	Cause of Violation	Corrective Action Taken

☐ **Sanitary Sewer Overflows and Other Unauthorized Discharges***

Event Date	Substance Discharged	Location	Volume (gals)	Duration (hrs)	Receiving Waters	Impact on Waters	Cause of Discharge	Date DEP Notified

☐ **Other Permit Violations***

- | | | |
|--|---------|-------|
| <input type="checkbox"/> Sample collection less frequent than required | Explain | _____ |
| <input type="checkbox"/> Sample type not in compliance with permit | Explain | _____ |
| <input type="checkbox"/> Violation of permit schedule | Explain | _____ |
| <input type="checkbox"/> Other | Explain | _____ |
| <input type="checkbox"/> Other | Explain | _____ |

*** If the space provided is not sufficient to record all information, please attach additional sheets.**

I certify under penalty of law that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

Prepared By: _____
Title: _____

Signature: _____
Date: _____

SUPPLEMENTAL LABORATORY ACCREDITATION FORM¹

Permittee Name: Willistown Township Chester County							
Address: 688 Sugartown Rd							
Malvern, PA 19355-3302							
PERMIT NUMBER				MONITORING PERIOD Year/Month/Day			
1596405						TO	
PARAMETER	ANALYSIS METHOD	LAB NAME		LAB ID NUMBER²			

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibly of fine and imprisonment for knowing violations.

Name/Title Principal Executive Officer

Phone: _____

**Signature of Principal Executive Officer or
Authorized Agent**

Date: _____

¹ Submit this form with the first Discharge Monitoring Report (DMR) or Annual Report, where sample results are submitted to the Department for compliance purposes. You do not need to send this form to the Department again UNLESS there has been a change to the lab(s), parameter(s) or method(s) of analysis.

² For parameter(s) covered under accreditation-by-rule, submit the lab's registration number in lieu of an accreditation number.

SPECIAL CONDITIONS

Water Quality Management Permit No. 1596405

Penns Preserve WWTP
Willistown Township, Chester County

This permit is subject to the following special conditions:

- I.** Effluent from the sewage treatment plant shall be sampled from a point after the **Effluent Storage Tank** and shall be limited as follows:

Parameter	Discharge Limitations (mg/l)			Monitoring Requirements	
	Average Monthly	Average Weekly	Instantaneous Maximum	Measurement Frequency	Sample Type
Influent Flow (gpd)	45,000		Report Daily Maximum	Continuous	Meter
Effluent Flow (gpd)	Monitor/Report		Report Monthly Total	Continuous	Meter
CBOD ₅	25		50	1/Month	Grab
Total Suspended Solids	30		60	1/Month	Grab
Fecal Coliform	200/100ml as geometric average			1/Month	Grab
pH	Within limits of 6.0 to 9.0 standard units at all times			1/Month	Grab

Additional treatment requirements include the satisfactory disposal of sludge and the reduction of quantities of oils, greases, acids, alkalis, toxic, taste and odor producing substances, inimical to the public interest to levels which will not pollute the receiving waters.

Monitoring results shall be reported monthly on the Discharge Monitoring Report (DMR). The term “composite” sample means a combination of individual samples collected at regular intervals over a time period. The term “grab” sample means an individual sample collected in less than 15 minutes. Samples and measurements taken as required, herein, shall be representative of the volume and nature of the monitored discharge.

- II.** Copies of monthly Discharge Monitoring Reports must be submitted within 28 days of the end of the monitoring period to:

Department of Environmental Protection
Southeast Regional Office
Water Management
2 East Main Street
Norristown, PA 19401

- III.** Unless, otherwise, specified in this permit, the test procedures for analysis of pollutants shall be those contained in 40 C.F.R. Part 136, or alternative test procedures approved pursuant to that Part. For the analysis of CBOD₅, consult Section 507 of Standard Methods.

IV. If the permittee monitors any pollutant more frequently than the permit requires, the results of this monitoring shall be incorporated, as appropriate, into the calculations used to report self-monitoring data on the DMR.

V. **Groundwater Monitoring Requirements**

The permittee shall effectively monitor the quality of the groundwater. The parameters to be tested, and frequency of analysis and other monitoring requirements shall be as follows:

- A. Quarterly analysis of groundwater sampled at groundwater monitoring wells **MW-2, MW-3, MW-4, MW-5, MW-6, MW-7 and MW-8** shall consist of: static water level, sampling depth, turbidity, pH, chloride, total phosphorus, ammonia nitrogen, nitrate nitrogen, nitrite nitrogen, total dissolved solids, fecal coliform, and alkalinity.
- B. Annual analysis of groundwater sampled at all groundwater monitoring wells shall consist of: total solids, settleable solids, suspended solids, total iron, total manganese, sulfate, and sodium.
- C. Groundwater elevations must be measured prior to purging the groundwater monitoring well.
- D. Before collection of the groundwater sample, a groundwater monitoring well shall be properly purged and allowed to recover to at least 90 percent of the well volume that was present prior to purging.
- E. All groundwater samples shall be collected from within the top five feet of the water elevation within the well column.

VI. **Groundwater Monitoring Data Reporting Requirements**

A. **Annual Groundwater Report**

All groundwater data shall be submitted to DEP **annually** and be in **report form**. The report shall be due to the Department of Environmental Protection (DEP) within 28 days of the end of the month of permit issuance. For example, if your permit was issued on March 4th, then your annual report is due by April 28th.

The annual report shall be mailed under separate cover and addressed to:

Department of Environmental Protection
Southeast Regional Office
Clean Water Program
2 East Main Street, Norristown, PA 19401
Attention: Hydrogeologist, Planning Section

The Annual Groundwater Monitoring Report shall include the following information:

- 1. General Information
 - a. Facility name
 - b. Facility permit number
 - c. Facility location (including municipality and county)
 - d. Facility contact information:
 - i. permittee name, address, and telephone number
 - ii. contact name and title
 - iii. facility operator name, address, and telephone number
 - iv. facility consultant name, address, and telephone number
- 2. Site Data

- a. A brief narrative that provides the date and description of any facility event which may have impacted any part of the groundwater monitoring program. (e.g., collapse of groundwater monitoring well, etc.).
- b. Average effluent flow for the year covered by the report.
- c. In tabular form, the following information needs to be provided for at least the last 5 years of system operation:
 - i. Date of sampling.
 - ii. Groundwater elevation.
 - iii. Sampling depth.
 - iv. Identification of upgradient and downgradient wells.
 - v. The results of the analysis of the samples.
- d. Background groundwater data generated prior to system start-up. **This information is absolutely needed and needs to be included in the data tabulation.**

B. Comprehensive Groundwater Evaluation (CGE)

As part of the facility's 5-year permit renewal application, the permittee shall submit a report that is a result of a comprehensive evaluation of the systems impact on groundwater. A Registered P.G. must identify any trends which may pose a threat to human health or certify that none are present. Should adverse impacts to groundwater be identified, the permittee needs to recommend actions to address the potential threat.

C. Groundwater Background Report

Within 60 days of system start up, or upon issuance of permit renewal a Groundwater Background Report shall be submitted to DEP. The report shall include the follow information:

- 1. Site Information
 - a. Brief narrative, including site limitations.
 - b. Soil type and bedrock lithology beneath the absorption areas.
 - c. Site drawings showing general location of absorption fields and monitoring wells. Drawings must show site topography.
- 2. Construction details of each groundwater monitoring well shall include:
 - a. Well depth.
 - b. Casing depth.
 - c. Static water levels.
 - d. Surface elevation.
 - e. Well log.
 - f. Water bearing zones.
 - g. Top of casing elevation.
 - h. Ground surface elevation.

The Groundwater Background Report is a one-time report. Should future changes or additions occur for any information in this section, an addendum that can be added to the report is all that is needed to update this report.

VII. Conditions for Spray Fields in Operation:

- A. Application of the effluent shall be managed to prevent runoff from the permitted spray fields and ponding of effluent.
- B. No irrigation is to occur on frozen soils.
- C. No irrigation is to occur if more than 0.5 inches of rainfall has fallen during the previous 24 hours.
- D. The operator is to assess soil moisture content and soil/vegetation conditions frequently. It is the operator's responsibility to inspect the fields on a routine basis to prevent and/or address damage to the irrigation fields.
- E. The spray fields shall be maintained to ensure that vegetation does not interfere with or impair proper operation of the spray heads.
- F. All non-forested spray fields must be maintained in perennial grass cover. Each growing season, the grasses must be harvested by cutting, with clippings removed off the spray fields.
- G. Fallen trees in wooded spray fields are required to be harvested. All work must be conducted during dry or frozen soil conditions to prevent damage to the soil.
- H. The permittee shall include with the monthly Discharge Monitoring Report a Supplemental Land Application System Form 3800-FM-BPNPSM0449 that indicates the gallons per day discharged to each of the constructed zones.
- I. Effluent flows to each spray field must be consistent with the maximum hydraulic loading requirements of the following tables, which provide the weekly maximum irrigation gallons for each zone.

**MAXIMUM WEEKLY HYDRAULIC LOADINGS
IN GALLONS PER ZONE
Zone 1 (Phase 1 Constructed)
Well Drained Soils 6.81 acres Grass Field**

Month	In/ac/wk	(gallons/week)
January	0.50	92,454
February	0.50	92,454
March	1.50	277,362
April	1.50	277,362
May	2.00	369,816
June	2.50	462,270
July	2.50	462,270
August	2.50	462,270
September	2.50	462,270
October	2.00	369,816
November	1.50	277,362
December	0.50	92,454

**Zone 2 (Phase I Constructed)
Moderately Well Drained Soils 2.15 acres Grass Field**

Month	In/ac/wk	(gallons/week)
January	0.50	29,189

February	0.50	29,189
March	0.50	29,189
April	1.00	58,378
May	1.00	58,378
June	1.50	87,566
July	1.50	87,566
August	1.50	87,566
September	1.00	58,378
October	1.00	58,378
November	0.50	29,189
December	0.50	29,189

Zone 3 (Phase II)
Moderately Well Drained Soils 3.81 acres Forested

Month	In/ac/wk	(gallons/week)
January	0.50	51,725
February	0.50	51,725
March	0.50	51,725
April	1.00	103,451
May	1.00	103,451
June	1.50	155,176
July	1.50	155,176
August	1.50	155,176
September	1.00	103,451
October	1.00	103,451
November	0.50	51,725
December	0.50	51,725

Zone 4 (Phase II)
Well Drained Soils 3.94 acres Grass Field

Month	In/ac/wk	(gallons/week)
January	0.50	53,490
February	0.50	53,490
March	1.50	160,471
April	1.50	160,471
May	2.00	213,961
June	2.50	267,451
July	2.50	267,451
August	2.50	267,451
September	2.50	267,451
October	2.00	213,961
November	1.50	160,471
December	0.50	53,490

VIII. Storage Lagoon Management

- A. The wastewater level in the storage lagoon shall be managed within the low and high-water level parameters as designed. The water level shall be controlled so that a freeboard of at least 24 inches is maintained, at all, times. The Department must be notified if the water level is anticipated to enter freeboard.

IX. Conditions for Phase II Spray Field Construction

- A. The Department must be notified at least two (2) weeks prior to the start of any construction activity on the system so that a pre-construction meeting with the Department can be held. Representatives from the permittee, design engineer, and system contractor must attend the pre-construction meeting.
- B. Prior to any construction activity, soil moisture levels, as confirmed by the Department, shall be such that a sample of natural mineral soil taken from the level of the maximum excavation will crumble if in a ball. Should any rain event occur during installation, the installation shall stop, and the site soil moisture levels are to be re-tested before work may proceed.
- C. At no time shall any material be stockpiled on the spray field areas. Care shall be exercised during construction to prevent undue compaction and damage to the soils and system. Only lightweight, low compaction equipment (less than 15,000 pounds; less than 6.5 pounds per square inch ground pressure) may be used on or in the irrigation fields.
- D. No roads or permanent paths may be constructed through the irrigation fields.
- E. When the system is complete and before start-up, the permittee shall notify the Department in writing that the system is complete and ready for inspection. All fields shall have established and sufficient vegetative cover to prevent soil erosion and run off.

X. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

- A. The exact place, date, and time of sampling or measurement.
- B. The person(s) who performed the sampling or measurement.
- C. The dates the analyses were performed.
- D. The person(s) who performed the analyses.
- E. The analytical techniques or methods used.
- F. The results of such analyses.

XI. Recordkeeping and Retention

The permittee shall keep records of operation and efficiency of the wastewater treatment facilities. All records of monitoring activities and results (including all original strip chart recordings for continuous monitoring instrumentation and calibration and maintenance records), copies of all reports required by this permit, and records of all data used to complete the application for this permit shall be retained by the permittee for three (3) years. The three-year period shall be extended as requested by the Department.

XII. Laboratory Certification

The Environmental Laboratory Accreditation Act of 2002 requires that all environmental laboratories register with the Department of Environmental Protection. An environmental laboratory is any facility engaged in the testing or analysis of environmental samples required by a statute administered by the Department relating to the protection of the environment or of public health, safety, and welfare.

- XIII.** The authorization to discharge contained in Section C of this permit shall expire in five years from the date of issuance, or reissuance. Application for renewal of this permit, or notification of intent to cease discharging by the expiration date, must be submitted to the Department at least 180 days prior to the above expiration date (unless permission has been granted by the Department for submission at a later date). In the event that a timely and complete application for renewal has been submitted and the Department is unable, through no fault of the permittee, to reissue the permit before the above expiration date, the terms and conditions of this permit will be

automatically continued and will remain fully effective and enforceable pending the grant or denial of the application for permit renewal. The application for renewal shall be submitted on the appropriate Water Quality Management Part II Application forms and shall include a tabulated summary of all groundwater monitoring data for the previous five years, including a discussion of groundwater quality trends resulting from this discharge.